

# PATENT COOPERATION TREATY

From the:  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:   
  
WRAY & ASSOCIATES  
Level 4 The Quadrant  
1 William Street  
PERTH WA 6000

**PCT 28 JAN 2005**

WRITTEN OPINION  
(PCT Rule 66)

Date of mailing (day/month/year) **19 AUG 2004**

Applicant's or agent's file reference  
109248;JHK:SMV:ad

REPLY DUE within **ONE MONTH**  
from the above date of mailing

International Application No.  
**PCT/AU2003/000953**

International Filing Date (day/month/year)  
**29 July 2003**

Priority Date (day/month/year)  
**29 July 2002**

International Patent Classification (IPC) or both national classification and IPC  
Int. Cl. <sup>7</sup> **F04B 43/10, 43/113**

Applicant  
**COMBINED RESOURCE ENGINEERING PTY LTD et al**

1. This written opinion is the **second** drawn by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
 

<p>I <input checked="" type="checkbox"/> Basis of the opinion</p> <p>II <input type="checkbox"/> Priority</p> <p>III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p>IV <input type="checkbox"/> Lack of unity of invention</p> <p>V <input checked="" type="checkbox"/> Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability, citations and explanations supporting such statement</p> <p>VI <input type="checkbox"/> Certain documents cited</p> <p>VII <input type="checkbox"/> Certain defects in the international application</p> <p>VIII <input type="checkbox"/> Certain observations on the international application</p>	<div style="border: 1px solid black; padding: 5px; width: fit-content;"> <p style="text-align: center;"><b>WRAY &amp; ASSOCIATES</b></p> <p style="text-align: center;"><b>19 AUG 2004</b></p> <p style="text-align: center;">Fee: <u>        </u> Acc: <u>        </u></p> </div> <p>Checked: <u>Ad-hoc entered - nr</u> ✓</p> <p>Date: <u>19/8/04</u></p>
---	---
3. The **FINAL DATE** by which the international preliminary examination report must be established according to Rule 69.2 is:  
**29 November 2004**

The applicant is hereby invited to reply to this opinion.

**When?** See the Reply Due date indicated above. However, the Australian Patent Office will not establish the Report before the earlier of (i) a response being filed, or (ii) one month before the **Final Date** by which the international preliminary examination report must be established. The Report will take into account any response (including amendments) filed before the Report is established. If no response is filed by 1 month before the **Final Date**, the international preliminary examination report will be established on the basis of this opinion. Applicants wishing to have the benefit of a further opinion (if needed) before the report is established should ensure that a response is filed at least 3 months before the **Final Date** by which the international preliminary examination report must be established.

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also** For an additional opportunity to submit amendments, see Rule 66.4. For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis. For an informal communication with the examiner, see Rule 66.6.

Name and mailing address of the IPEA/AU  
AUSTRALIAN PATENT OFFICE  
PO BOX 200, WODEN ACT 2606, AUSTRALIA  
E-mail address: pct@ipaustalia.gov.au  
Facsimile No. (02) 6285 3929

Authorized Officer  
  
**R. SUBBARAYAN**  
Telephone No. (02) 6283 2377

**BEST AVAILABLE COPY**

Checked: ES2  
Date: 19/08/04

**I. Basis of the opinion****1. With regard to the elements of the international application:\***

- ☐ the international application as originally filed.
- ☒ the description, pages 1,4-6,8-18, as originally filed,  
pages , filed with the demand,  
pages 2,3,7, received on 22 July 2004 with the letter of 22 July 2004
- ☒ the claims, pages , as originally filed,  
pages , as amended under Article 19,  
pages , filed with the demand,  
pages 19-25, received on 22 July 2004 with the letter of 22 July 2004
- ☒ the drawings, pages 1/15-15/15, as originally filed,  
pages , filed with the demand,  
pages , received on with the letter of
- ☐ the sequence listing part of the description:  
pages , as originally filed  
pages , filed with the demand  
pages , received on with the letter of

**2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.**

These elements were available or furnished to this Authority in the following language which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

**3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:**

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

**4. ☐ The amendments have resulted in the cancellation of:**

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/fig.

**5. ☐ This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed"

**BEST AVAILABLE COPY**

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. Statement**

Novelty (N)	Claims 1-46	YES
	Claims	NO
Inventive step (IS)	Claims 1-32,34,35,37,42-44	YES
	Claims 33,36,38-41,45	NO
Industrial applicability (IA)	Claims 1-46	YES
	Claims	NO

**2. Citations and explanations**

- D1) GB 2195149  
D2) WO 82/01738  
D3) US 4543044  
D4) US 5114319  
D5) US 6345962

**INVENTIVE STEP**

Claim 33: As reasoned in my first opinion, citations D1 & D2 disclose all of the features of this claim except that of the one end of the tube structure being closed. However this feature is disclosed by citation D5 and it would be obvious to a skilled addressee to combine this document with either one of D1 or D2 and thereby arrive the invention of claim 33. This claim therefore lacks an inventive step.

Claims 36,38-40,45: Citations D3 & D4 disclose a pumping system having at least two pumps, delivery means for delivering pumped fluid to each pumping chamber in timed sequence and mean for supplying actuating fluid to each actuating region in time sequence to cause the pumping chamber to undergo a discharge stroke. Although these documents do not disclose the pumping chambers as including a tube structure, such pumping structures are common general knowledge in the art (as evidenced by citations D1, D2, D5). It would be obvious to a skilled addressee to combine this common general knowledge with the teachings of D3 or D4 and thereby arrive at the claimed invention.

Claim 41: Citation D5 teaches a fluid operated pump in which the tube structure is closed at one end and the other end communicates with a port through which pumped fluid can enter into and discharge from the pumping chamber. However it does not explicitly disclose that the closed end is in an elevated position in relation to the other end. However it is considered that it would be obvious to a skilled addressee that this configuration can be used with the teachings of D6 and would thereby arrive at the claimed invention in a non-inventive manner. These claims therefore lack an inventive step.